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A Few Observations on Work and Procedure under the Diseases of Animals Acts, 1894-1935, and the Agriculture Act, 1937*

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It is not possible, in the brief time at my disposal, to touch more than the fringe of this subject, but I have chosen a few points which I hope will be of interest and give rise to a discussion. There must be few at this meeting who are not directly concerned with the State Veterinary Service and those of you who are participating in the work must, at some time or another, have met with problems which you would have liked to discuss with colleagues—problems which are probably of common interest. We are all liable to meet "snags" and equally liable to make mistakes. The important thing is to profit not only by our own but other people's experiences, and to avoid making the same mistakes twice.

I should like to stress here that any remarks I may make in this paper are not in any way intended as a criticism of the efforts of others but are offered in a helpful spirit. I am too keenly aware of my own particular glass-house to invite the throwing of stones in retaliation.

CLERICAL WORK

There is usually a degree of reluctance on the part of a man who has done a hard day's work in the field to sit down to clerical work when he arrives home, but I think it is well to remember that the clerical aspect is an important part of the whole job. Each of us is working for a Department and, as the Department accepts responsibility for our actions, it follows that we must give an account in writing of our stewardship. Moreover, we must bear in mind that certain documents are a statutory obligation imposed by Act of Parliament and, as I see it, they serve the double purpose of protecting the veterinarian as well as the stock-owner. The practitioner may feel he is dealing with a client who is an old friend whose word is as good as his bond: but life is full of unexpected reactions and documentary evidence in official matters is essential to both parties.

The prime factors to be kept in mind when rendering reports, accounts and other documents are accuracy, clarity and attention to detail. One of the many functions of a Divisional Inspector is that of checking over the various reports, test charts, etc., in order to ensure that they conform to the Ministry's requirements and it is necessary that reports on disease matters should contain sufficient data to reproduce in words the local picture, as seen by the Veterinary Inspector.

Only in this way can the reader judge the position for himself. The man on the spot may be confronted with a more or less complex situation which he clears up to his own satisfaction there and then by a few pointed questions; but we are liable to forget that the fellow who reads the reports may want to ask the same questions and is at a disadvantage in distance. The only course open to him is to resort to written queries. And here I should like to make it clear that the receipt of a memorandum of this nature does not, as some people seem to imagine, automatically imply that our actions are being adversely criticised. It is usually a case of what I have pointed out, *viz.*, the reports are incomplete in the view of the reader and he is simply asking for more information. I have met many individuals (whole-time as well as part-time Inspectors) who regard the receipt of memos. of this nature as a personal affront and who seem to be able to read into them all kinds of things that were never intended. In these matters we should try to see the other man's point of view; otherwise, we waste nervous energy by allowing our imaginations to run riot. It has been my experience that it is no easy matter to compose memoranda in such a way that the recipient will not feel he is being chastised. Try it for yourself some time and you will appreciate the point.

Many documents are returned to their writers because of errors which appear to be due to high-speed methods or too casual treatment. I know full well it is a great temptation, when you are harassed by pressure of work, to dash through reports and so on, but I would ask you to have pity on the Divisional Inspector! It only adds to *his* pressure of work to have to return these things for correction. Please remember that he is obliged to read your reports and, although yours may be an isolated report, "mony a mickle mak' a muckle."

If any unusual feature has appeared in any particular aspect of the work, it is usually good policy to add a short explanatory note. It sometimes anticipates the necessity for a query. If there is an unusual charge in an account such as haulier's expenses in a tuberculosis case, it saves time and trouble if the receipt is pinned to the account. Finally, all certificates and accounts should be posted to Divisional Office on the day on which the work is performed. If the clinical certificates and accounts are sent together, the work of Divisional Office is simplified enormously.

All these things may sound elementary but it is surprising the amount of variation one finds.

Instructions and Circulars.—Any system, to be successful, must be flexible and it follows as a matter of course that basic instructions as to procedure require amendment from time to time. I would strongly urge that these amending circulars be carefully read, and kept in orderly fashion. It is not all uncommon, at least in my experience, to find that they are kept in a haphazard manner (I recently had one case where an Inspector fervently assured me he had never received circular No. 228 but, after I had arranged to provide him with a copy, he telephoned to say that he had found it in the travelling case he had had on his holidays last year). My own method is to keep the circulars in numerical order in file covers and also to have an index to which quick reference can be made. The small amount of trouble involved in this is well worth while. When a new instruction cancels or amends a previous one, I make a point of annotating at once the circular thus affected and also my index.

Having read the circular, you should consult your Divisional Inspector on any point which is not clear to you. He is not omniscient but he can usually help you.

Tuberculin Test Charts.—I make no apology for referring to these, because it is more than ever essential, in these days of comparative testing, to ensure that the results of the tests are carefully recorded. It may sound unnecessary to emphasise this but it is a fact that avoidable clerical errors do crop up fairly often. While there can be no objection to the operator having the test charts made out by someone else from the field-testing book, it behoves each of us to make certain that the charts are accurate before we put our names to them. The responsibility is ours and ours alone.

To illustrate my point, let me quote one example I recently experienced. In this case the skin measurements and the nature of the reactions were accurately recorded but the "results" columns were quite inconsistent with the reactions. Many reactions showing increases of as much as 12 or more millimetres with extensive oedema and pain were recorded as negative. The charts had been made out by a clerk and, at first glance, they were a picture of what charts should be; the picture, however, lost all its charm on close inspection. The moral is obvious.

FIELD NOTES

I should like to refer very briefly to one or two of the more practical features met with in the field. Each disease has its own particular aspects which would merit discussion but my time is limited. In fact, I have already exceeded the ten minutes allotted for to-day's papers.

Anthrax.—The only reference I intend to make in this connection is with regard to the site selected for taking blood smears. My own practice was to utilise the infra-orbital vein. Others prefer an ear-vein. It was suggested to me by a L.V.I. that the under-surface of the tail was an excellent site and has the advantage that it is free from hair, it can be effectively cleaned with spirit before incision, and subsequent spilling of blood can easily be controlled by tying a wad of cotton wool over the incision. This last qualification is so important in the control of contamination of surroundings that I have used this site ever since. These remarks refer, of course, to the taking of blood smears in cattle only.

Swine Fever.—At the risk of stressing the obvious, I should like to refer to one or two items I keep in mind when conducting swine fever enquiries.

I make a point of asking to see the live pigs first, leaving the suspected pigs to the last. My field note-book is made out in such

* Presented to the North Wales Division, N.V.M.A., Meeting at Rhyl, March 26th, 1943.

a way that I can record the various grades of pigs with ease and enter all the information required for the S.F.I. report. (Note-book exhibited.)

As for autopsy, I have made it a routine habit to commence by examining the feet for foot-and-mouth disease. The feet are washed, if necessary, for this purpose, and this habit has shown me the great variety of foot lesions to be found in pigs, all of which come in useful for differentiation purposes. My next concern is to examine the throat for anthrax, first by palpation and then by incision. Having satisfied myself on these two points, I can proceed to open the rest of the carcase.

It has been my experience that it pays to keep an open mind in all autopsies connected with suspected swine fever cases and to carry out a full examination of each carcase. I mention this because I have frequently seen only the ileocaecal valve exposed for examination whereas, as we know, typical lesions are often found in the colon when there are none in the caecum. The stomach, kidneys, lungs and heart should all be examined with equal care.

The report on the case should contain an exact record of our findings if only because the final decision as to the existence of disease rests with the Ministry and that decision is based on our reports and any material submitted for confirmation of disease.

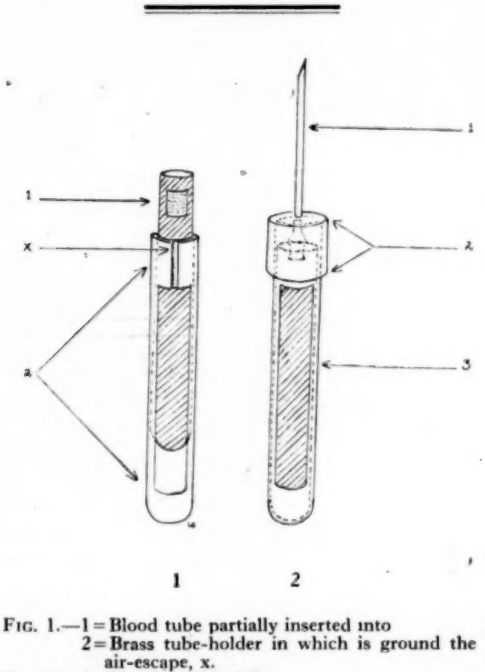
These notes are very brief and there are many other practical aspects of field work to which I should like to have made reference, but that is not possible in a short paper of this nature. I only hope that the points I have touched upon will not be without interest to some of you.

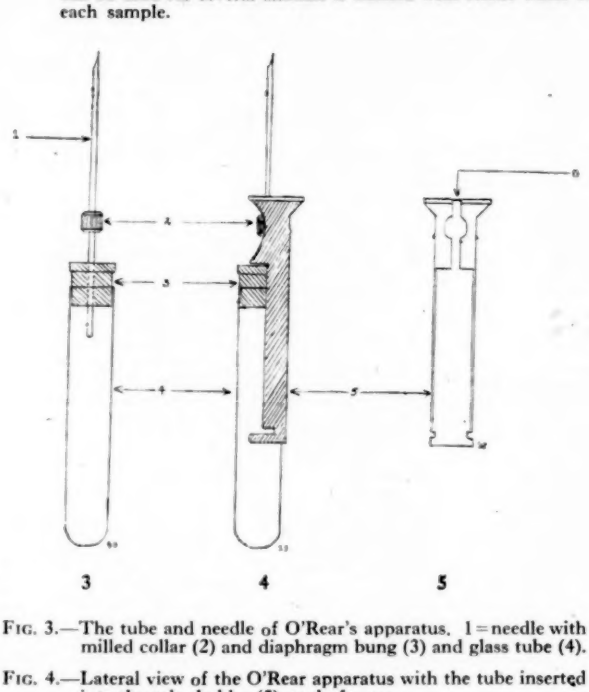
Two American Methods for Collecting Bovine Blood for the Brucella abortus Tube Test

G. B. BROOK, D.Sc., F.R.C.V.S., F.R.S.E.

The several methods and variety of equipment which the writer has seen or used in this country for the withdrawal of blood samples from the ox have one disadvantage common to most in that blood escapes, usually on to the operator, between puncture of the vein and presentation of the collecting vessel and after this has been discarded before withdrawal of the needle. This defect in technique becomes quite important when large numbers of cattle are to be operated on. The Americans sought to resolve this problem some years ago and in 1936 two U.S.A. veterinarians, Dr. Augsberger, Lima, Ohio, and Dr. O'Rear, Bureau of Animal Industry, Washington, showed me two simple types of apparatus designed to overcome this difficulty.

Dr. Augsberger's equipment is depicted in figures 1 and 2. Blood is collected into a glass tube which is held in a metal holder made from a piece of brass tubing; a window cut in the latter enables the operator to observe the level of the accumulating blood. The 18-gauge needle is soldered into a piece of brass tubing (2, figure 2), which being larger than that which contains the blood tube sits helmet-like over its mouth (figure 2). For use the apparatus is assembled as in figure 2 and the needle forced into the jugular vein, the brass tube-holder meanwhile protecting the hand in case the tube breaks. The blood displaces the air in the tube by way of the groove "x" (figure 1) in the head of the tube-holder. A set of mounted needles is carried, but a single needle can be used for several animals if flushed with sterile water between each sample.





1 2 3 4 5

FIG. 1.—1 = Blood tube partially inserted into
2 = Brass tube-holder in which is ground the air-escape, x.

FIG. 2.—1 = Needle soldered into
2 = Brass helmet sitting on
3 = Tube-holder. The tube and the hidden parts of the needle and tube-holder are depicted with dotted lines.

FIG. 3.—The tube and needle of O'Rear's apparatus. 1 = needle with milled collar (2) and diaphragm bung (3) and glass tube (4).

FIG. 4.—Lateral view of the O'Rear apparatus with the tube inserted into the tube-holder (5) ready for use.

FIG. 5.—Front elevation of the O'Rear tube-holder.

collar and the vein punctured. As blood accumulates in the tube the pressure of the contained air increases. When this equals the venous blood pressure flow ceases and the needle is withdrawn from the vein.

Each sample is collected through a separate needle, an appropriate number of which can be carried ready sterilised. This apparatus was manufactured by Beeton & Dickinson & Company, Rutherford, New Jersey, U.S.A.

The writer has an O'Rear needle and holder which he would be willing to loan on trial.

Dr. O'Rear's apparatus (figures 3, 4 and 5) comprises a tube-holder to protect the hand. The holder accommodates a tube which carries a rubber stopper with a central diaphragm (figure 3). The 18-gauge needle is about three inches in length and carries a milled collar (2, figures 3 and 4) half way down the stem. When in use the blunt end of the needle is driven through the diaphragm and pushed into the tube (figure 3). The tube and needle are received into the tube-holder (figure 4), which is carried in the right hand with the thumb on the exposed segment of the milled

(*Continued at foot of previous column.*)

CLINICAL COMMUNICATION

Two Cases of Avitaminosis A Encountered in Poultry

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(Department of Agriculture, The University, Leeds*)

The last few years have seen a great increase in the interest taken by the profession in matters connected with the poultry industry, in which the "backyard" poultry keeper is much in evidence. The problem of feeding poultry has become acute during the last 18 months, and in consequence a number of poultry carcases submitted to this laboratory for *post-mortem* examination exhibit lesions associated with dietetic errors.

Within the past two years we have encountered several cases of salt poisoning in chickens, usually as a result of the feeding of salted beans. A common cause of death is impaction of the crop and gizzard consequent upon allowing the birds to scratch over unsuitable ground and pick up large quantities of tough fibrous material such as dead leaves and coarse grass. Perhaps the greatest number of fatalities in this class result from the feeding of coupon-free meals which have a high crude fibre content. Authorities (Willcox, Bakker) place the maximum amount of fibre that poultry can tolerate in the diet as being between 5 and 10 per cent. Many of the coupon-free meals contain up to 18 per cent. fibre The *post-mortem* findings in these cases are a congestion of the blood vessels associated with the wall of the alimentary canal, the lower end of which is more distended with foodstuff than is normal.

Recently we have encountered two separate cases where death appears to have been due to, or associated with, avitaminosis A. On October 9th, 1942, a poultry keeper in the vicinity of Wakefield reported to the Ministry of Agriculture's Divisional Office that a serious disease had appeared in a flock of sex-linked pullets of which 50 had died during the previous few days and many others were ill. Dr. G. B. Brook visited the farm on the morning of the same day and found that the birds involved were 250 eight-months-old R.I.R. × L.S. pullets either laying or on the point of lay; they were of good type and physique. They had been purchased in February, 1942, as a lot of 260 day-olds from a well-known hatchery and had reared well. For the first four months they were kept intensively and after the chick stage received the following diet:—

Morning feed of wet mash compounded of sharps, flour sweepings from a biscuit factory and fish meal (10 per cent.). During the day they had access to the same mixture as dry mash *ad lib.* together with an evening grain feed of oats (1941 crop). The birds received morning and evening as much as they could eat in about 15 minutes. From the age of four months (*i.e.*, July onwards) they were given free range on grass of poor quality (the typically inferior herbage of an area exposed to smoke and fumes in a colliery district). The diet was later changed. A commercial "balancer meal" said to contain about 2 per cent. of cod-liver oil was given in the morning as wet mash (1 oz. per head) and as dry mash *ad lib.* during the day; the grain in the evening meal was continued.

Early in October a white deposit was noticed around the vent of a few birds, five of which were found dead a few days later. Other birds developed this "white diarrhoea," were dull for three days and then succumbed, so that by October 9th 50 birds had died and between 60 and 70 were obviously ill, with symptoms varying from "white vent" and slight dullness to a marked drowsiness, staggering gait and complete inappetence.

On the day of the investigation, four of the most severely affected birds were killed and a *post-mortem* examination was made; in each case the naked-eye appearance of the carcase and viscera was normal with the exception of that of the urinary system, oesophagus and duodenum. The kidneys and ureters had an appearance similar to what one would imagine could be produced if a white semi-fluid bismuth mixture were injected under pressure up the ureters. These latter were distended to the size of a large wheat straw and packed with a white material the consistence of putty. Each kidney was greatly enlarged and the free surface, which protruded into the abdominal cavity, was covered with white centres from a pin-head to a lentil in size, and these on cross-section were seen to be scattered throughout the whole organ. A white creamy fluid oozed from the cut surface. The cloaca contained a mass of the same material which, adhering to the external opening of the vent, had been thought by the owner to represent "white diarrhoea." The mucous membrane of the anterior duodenum exhibited multiple small haemorrhages. The mucous lining of the middle third of the oesophagus showed circular areas white in colour and varying in size up to that of a farthing. These were confluent with the surface of the mucous membrane and adherent to the subjacent tissue. The lesion on cross section was seen to be grey in colour, confined to the mucosa and rubber-like in consistency.

A tentative diagnosis of avitaminosis A was made and pending laboratory confirmation the birds were put on the following diet:—

A wet mash composed of boiled whole potatoes dried off with sharps containing 2 per cent. cod-liver oil to be given twice daily the birds to have access to scalded chopped hay and raw swedes and to be given open range on grass land.

The owner, who is not a member of the Accredited Poultry Breeding Scheme, was referred to the Provincial Investigation Officer. At that time there were no further deaths, so four affected birds were killed by "wringing the neck" and sent to us for examination.

The *post-mortem* appearance was similar in all four birds. The carcases were in fair condition. The abdominal organs were normal, although the ovary had not commenced to function. The lining of the oesophagus was in each case seen to exhibit the same lesions as noticed by Dr. Brook, although in the carcases examined by us the size of these lesions never exceeded 3 to 4 mm.

A blood smear was examined microscopically, but we were unable to observe any abnormality. Cultures were prepared on plain agar, on blood agar, McConkey's agar and glucose broth from the heart blood, liver and spleen of each bird. Plates and broth were incubated at 37° C. and were examined at 24 and 48 hours. We were unable to demonstrate the presence of any organism of significance.

The lesions noticed in the oesophagus suggested avitaminosis A and this suggestion was reinforced by the fact that it is considered that this deficiency may be responsible for the deposit of uric acid derivative on visceral organs in the condition generally referred to as visceral gout. Consequently, the livers of three of the birds were submitted to Mr. Willcox (Lecturer in Agricultural Chemistry, Department of Agriculture, Leeds) for determination of the vitamin A content. In order to provide a standard, the livers of two chickens which had been submitted from other sources for *post-mortem* examination were also submitted for analysis. These two birds had died from non-bacterial conditions (ruptured oviduct in one case and impacted gizzard in the other).

The report supplied by Mr. Willcox contained the following information:—

Bird	Weight of Liver in Grammes	Blue Units in Liver	Blue Units per Gramme	International Units per Gramme*
1	22·308	109	4·89	2·93
2	37·062	168	4·54	2·72
3	16·327	45	2·76	1·66
4	29·539	1,989	67·42	40·45
5	40·783	2,704	66·47	39·76

* Using Moore's factor of 0·6 (*Biochem. J.* 1937, **31**, 153). Birds 1, 2 and 3 were the Diseased; 4 and 5 were the Control birds.

No chemical analysis was made of the livers of any of the bird which had probably died as a result of the kidney disease. Had such examination been made, it is reasonable to assume that even lower figures would have been obtained in Columns 4 and 5.

The above figures appear to confirm the diagnosis and avitaminosis A would account for the lack of condition noted in the birds and also for the fact that the egg production of the apparently unaffected birds was well below normal. Whilst the condition of avitaminosis *per se* was probably not the cause of death, this deficiency disease resulted in the accumulation of urates in the pelvis of the kidneys until a point was reached when these organs could no longer function sufficiently well to allow life to continue.

An enquiry was made in December, 1942, when the owner reported that after the recommended alterations to the diet and management had been made, no new cases of illness occurred; but all the birds which had previously exhibited symptoms, however slight, of the disease, eventually died. The total mortality was 140 (68 per cent.).

The second case is not very satisfactory because few details are forthcoming.

A member of the team (centred at the Department of Agriculture) which is carrying out investigations into the question of wireworm infestation of new ploughland, brought in a carcase of a chicken from one of the farms he had visited. This bird had been one of a flock kept in conditions such that had all the birds remained alive, there would have been gross overstocking. However, some 40 per cent. deaths had occurred, so that at the time this specimen was submitted to us there was no overcrowding. Apparently the birds were reared on semi-intensive lines and were allowed to scratch over bare earth in the open air.

Post-mortem examination of the carcase revealed the following points. The bird was a Light Sussex pullet and the carcase was in

* Now at the Agricultural Advisory Office, Bristol.

a state of extreme emaciation. Considerable distortion of the sternum was noticed. There was no macroscopic abnormality discernible in the internal organs, except a slight inflammation of the alimentary canal. The caeca were packed with *Heterakis gallinae*; the author had not previously encountered such an excessive worm burden in the caeca. The ileum was infested with *Ascaridia galli*, although here the numbers of the parasite were less than was the case with the caecal pinworm. Even allowing for the excessive overcrowding it appeared that this degree of parasitological infestation was excessive; this suggested avitaminosis A, and the oesophagus was examined. Lesions identical with those recorded in the Wakefield outbreak were seen. Bacteriological examination on similar lines to those already given again failed to reveal the presence of any pathological organism. The liver was submitted for analysis with the following result :—

Weight of liver	16·3978 grammes
Total Blue Units	22·8
International Units per gramme ...	0·83

This is the lowest figure for international units per gramme that we have encountered. It would seem that in this case the lack of vitamin A allowed the development of intestinal parasites to an inordinate degree. Which of these factors was the cause of death it is difficult to say. It may be surmised that not a few of the deaths that this owner had encountered were due to kidney trouble. However, the poultry keeper was not inclined to co-operate and no further specimens were forthcoming.

These two cases serve to emphasise the fact that avitaminosis is not merely a text-book condition and they remind us of the importance, especially under war-time conditions, of maintaining a supply of the necessary vitamins in the diet.

Acknowledgments.—My thanks are due to Dr. G. B. Brook for providing the very complete history of the Wakefield outbreak, to J. S. Willcox, B.SC., A.I.C., for many chemical determinations carried out and to S. L. Hignett, formerly Veterinary Investigation Officer, Yorkshire Province, for permission to publish the above cases.

VETERINARY COLLEGE FOR WALES PROPOSAL

Discussing the establishment of a veterinary institution in Wales, at a meeting of the Cardiganshire Agricultural Education Committee, the County Organiser (Mr. D. J. Morgan) said the time had arrived for Wales to press for the establishment of a veterinary college in the country. Mr. A. F. Butler, a Ministry inspector, speaking unofficially, agreed that the time was opportune to establish a veterinary college in Wales. The country suffered mostly from lack of Welsh-speaking veterinary surgeons, especially in the rural areas. There should be one State scholarship for each county in Wales to enable Welsh-speaking boys and girls to pursue a course of veterinary science in one of the existing colleges. If another college was to be established, it should be in Wales.

Mr. D. D. Williams proposed that if it were found necessary at any time to set up another veterinary college, priority should be given to Wales, and that in the meantime the Government should give financial aid to enable Welsh-speaking students to pursue courses. The proposition was carried.

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THE "CONTROL" SCHEME IN WALES

At a recent meeting of the Council of Agriculture for Wales Professor Ashby proposed that, in the opinion of the Council, entirely inadequate use was being made of the provisions of the scheme for the control of diseases of dairy cattle, and that they draw attention of all agricultural organisations and authorities, including War Committees in Wales, to the advantages of the scheme.

The motion was adopted.

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CASUALTY ANIMALS

The Ministry of Food reminds farmers that when the dressed carcase of an animal which has had to be slaughtered urgently because of illness or injury is sent to a Government slaughterhouse, it must be accompanied by the hide or skin and other offals. These offals are necessary for the meat inspector to carry out his inspection, and unless they are available the meat inspector may be unable to pass the carcase as fit for human consumption, which means a loss to the owner.

* * * * *

Despite all the hilltops and mountain sides now growing crops, despite all the downlands and derelict areas we have reclaimed and put under the plough, despite the roping in of lands that haven't felt the plough almost since the flood, the acreage of land lost to agriculture for military and industrial purposes is still greater.—*Farmers' Weekly.*

ANNOTATION

The So-Called Virus Abortion in Mares

In 1922 there occurred in the horse-breeding State of Kentucky, U.S.A., an apparently new and unknown type of abortion in mares. On investigation by DIMOCK,[1] of the local Agricultural Experiment Station, negative evidence for paratyphoid abortion due to *Salmonella abortus equi* was obtained and no other causal micro-organism of any kind could be found.

The matter remained obscure for many years but DIMOCK and his associates continued to investigate and observe and gradually they collected evidence which they came to regard as proof that a new virus infection was involved. The aborted foals showed characteristic changes, being jaundiced and ascitic and having a swollen liver with many whitish spots on the surface and within the parenchyma. Histological examination revealed focal necrosis of the liver and intranuclear inclusions, the same being present in the lungs. Attempts to isolate a virus on fowl embryos failed and attempts to cause a disease or abortion in laboratory animals largely failed also. It is true, however, that a few of about 20 pregnant mares inoculated with filtered or unfiltered foetal tissues and fluids from natural cases did abort, though the conditions of the experiments leave doubt as to whether the abortions were due to the inoculations and if so whether a filterable virus was the cause.

Meanwhile certain European workers claimed to have observed a virus abortion in mares (MIESSNER,[4] *et al.*, and HUPBAUER[5]) but they did not obtain satisfactory proof. It was only in 1942 that SALYI,[7] in Hungary, found inclusion bodies in aborted foals, similar to those of the Kentucky disease.

Thus we have arrived at the same stage in both the American and European disease. The next question is, "is the finding of intranuclear inclusion bodies firm evidence of infection by a filterable virus?" GOODPASTURE, the well-known virus disease research worker, of Vanderbilt University, Tennessee, who investigated Dimock's cases, is quoted by the latter as having given a positive opinion. He also, with ANDERSON,[2] failed to cause abortion in mice, guinea-pigs and hamsters with the mare abortion "virus," but did cause disease by inoculating newborn hamsters which showed the characteristic inclusion bodies. These workers also[3] (strangely enough with unfiltered material in both experiments) succeeded in infecting human amnion grafted on fowl embryos.

The crucial question about the existence of a filterable virus remains unanswered from these experiments and we are thrown back afresh to the query stated above. Incidentally SALYI in a footnote reports the finding of inclusion bodies in the livers of foals born at full term but dying within three days. He formed the impression that in foals which survived three days and died soon afterwards, the inclusion bodies present at birth disappeared at about the third day. This suggests the need to examine a large number of foals, normal and abnormal, for inclusion bodies. Such have been reported from new-born human and other animals and it must be said that their nature is to a great extent obscure. LUCAS[6] reviews the whole problem of inclusion bodies. He says that the presence of inclusion bodies is no proof of the presence of a virus but merely an indication that a virus should be considered. Some viruses give rise to inclusion bodies and others do not and some inclusion bodies occur in tissues of animals free from ill-health. However, to return to Kentucky, DIMOCK appears satisfied that the abortion in mares is infectious and is trying to produce a vaccine against it, though no results are yet available.

J. TWEEDALE EDWARDS.

SELECTED REFERENCES

[1]DIMOCK, EDWARDS and BRUNER. (1942.) *Kentucky Agric. Exp. Station.* Bulletin 426.
[2]ANDERSON and GOODPASTURE. (1942.) *Amer. J. Path.* **18.** 555.
[3]GOODPASTURE and ANDERSON. (1942.) *Ibid.* 563.
[4]MIESSNER and HARMS. (1937.) *Dtsch. tierärztl. Wschr.* **45.** 685.
[5]HUPBAUER. (1938.) *Ibid.* **46.** 745.
[6]LUCAS. (1941.) *Vet. Student, Iowa.* **4.** 11.
[7]SALYI. (1942.) *Arch. Tierhlk.* **77.** 244.

WEEKLY WISDOM

"*Knowledge and wisdom, far from being one,*
Have oft-times no connection. Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.
Knowledge is proud that he has learned so much;
Wisdom is humble that he knows no more."—Cowper.

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The first outbreak of swine fever in the Isle of Man since 1936, which occurred recently on a farm at Lezayre, involved the slaughter of 200 pigs. A standstill order was applied to all pigs in the parish.

NOTES AND NEWS

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

July 5th.—N.V.M.A. Committee Meetings at 36, Gordon Square, W.C.1: Sub-Committee on Collaboration with Animal Welfare Societies, 1 p.m.; Organising Committee, 2 p.m.; Finance and General Purposes Committee, 3.30 p.m.

July 6th.—Meetings, N.V.M.A.: Further Combined Meeting of Joint Veterinary Officers and Public Health and Parliamentary, Finance and General Purposes and Survey Committees, 10.30 a.m.; **Meeting of Council**, 2.15 p.m., both at the Connaught Rooms, Great Queen Street, W.C.2.

July 7th.—Meeting of tht Editorial Committee, N.V.M.A., at 36, Gordon Square, W.C.1, 2.30 p.m.

July 14th.—Annual Summer Meeting of the Lancashire Division, N.V.M.A., at Liverpool; programme (see notice) commencing with luncheon at 12.45 p.m.

July 17th.—Meeting of the Society of Women Veterinary Surgeons, Royal Station Hotel, York, 2.30 p.m.

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PERSONAL

Birth.—Murray.—On June 3rd, 1943, to Mr. and Mrs. E. G. Murray, "Woodbine," Huntly, a son.

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Marriages.—Bagenal—Maxted.—On May 29th, at Littlebourne, Pilot Officer Beauchamp Bagenal to Elizabeth Maxted, M.R.C.V.S.

Grant—Agnew.—At the Sacred Heart Church, Lauriston, Edinburgh, on June 7th, 1943, by Rev. Father Capaldi, S.J., Gordon Grant, M.R.C.V.S., of Spey Bay, Morayshire, to Kathleen Agnew, Ballaghy, Co. Derry, Northern Ireland.

Stuart—Campbell.—On June 25th, 1943, at Maryburgh, Conon Bridge, Ross-shire, James D. Stuart, M.R.C.V.S., of Kinlochlaggan, to Marjorie Elizabeth, elder daughter of Mr. and Mrs. William Campbell, Conon Bridge.

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Forthcoming Marriage.—Gates—Cameron-Kerr.—The engagement is announced between Captain G. M. Gates, M.R.C.V.S., of the R.W.A.F.F., Nigeria, and of Arundel, Sussex, and Frances Charlotte, eldest daughter of Mr. and Mrs. J. Cameron-Kerr, of Westcliffe, Johannesburg, Transvaal.

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Mr. Peter Z. Mackenzie, M.R.C.V.S., of the Sudan Veterinary Service, was given Governor General's commission with the rank of Bimbashi into the Sudan Defence Force in May, 1942, and gazetted into the British Army on General List early in 1943.

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R.C.V.S. OBITUARY

Hepburn, John Alexander, J.P., Ardmohr, Stirling Road, Milnathort, Kinross-shire. Graduated Edinburgh, December 20th, 1893. Died June 21st, 1943; aged 74 years.

Imrie, David, 9, Charles Street, Largs. Graduated Glasgow, May 24th, 1888. Died June 21st, 1943; aged 75 years.

The Late Mr. John A. Hepburn, J.P., M.R.C.V.S.

Agricultural circles in Scotland have lost a well-known personality by the passing of Mr. John A. Hepburn, of Milnathort. He succeeded to his father's practice after studying at the University of Edinburgh and the Edinburgh Veterinary College. Appointments held by Mr. Hepburn included that of Inspector to Kinross County Council, while he was a member of the Panel set up by the Department of Agriculture for Scotland for the examination of stallions. For many years he acted as Secretary to Kinross-shire Agricultural Society and on this he expended much time and energy which contributed largely to the highly successful issue of this annual event.

The late Mr. Hepburn took a prominent part in local affairs, acting on the School Board, the Parish Council, the County Council and various committees. He was a J.P. for the County of Kinross. Mr. Hepburn was unmarried.

There was a large assembly at the funeral to Orwell Churchyard, when among those present were Mr. John F. Watson, M.R.C.V.S. (the late Mr. Hepburn's partner), the Provost of Kinross, representing Kinross Town Council, and the County Clerk of Kinross, representing Kinross County Council.

The Late Mr. David Imrie, M.R.C.V.S.

Our Scottish colleagues have also to mourn the loss of another well-known figure in Mr. David Imrie, formerly of Nithsdale, Bishopbriggs, Glasgow. Mr. Imrie, moreover, will be sorely missed, also, in other than Scottish circles, for he was a regular attender at the Congresses of the N.V.M.A.

Mr. Imrie, who was a native of Strathbungo district of the city, was one of the late Principal M'Call's earlier students at Glasgow Veterinary College. Fifty years after graduation (1938) he received a presentation to mark his jubilee from a number of pupils. During the last war and up till 1923 he conducted the classes in medicine and surgery at Glasgow Veterinary College, and from 1923 to 1937 he was an examiner in surgery for the Royal College of Veterinary Surgeons. He remained in practice till 1940, and had since resided at Largs, where his death occurred.

An Appreciation

W. W. L. writes:—

"And so passes one who has left a great mark on our profession. He was a keen, enthusiastic and painstaking worker who revelled in the problems met with in his daily life. Quiet, and unassuming, he never courted the limelight nor did he often speak at meetings. But by himself one found him to be a delightful companion and possessed of a valuable fund of information which he freely put at the disposal of his listeners.

Like so many of his colleagues in the West of Scotland he was never without pupils; in fact he himself had no idea of the numbers who had the benefit of his teaching and example. They were all *his* boys and he watched their future careers with the greatest interest and pride. He was never jealous, rather glorying in and appreciating the good work of others.

Though he has left us, his good works live and his influence passes on through his pupils to future generations.

He had an uncanny gift of insight into the characters of his pupils and I know of no instance when his judgment was at fault. He was proud of us all and on one occasion when, unthinkingly, I asked if his pupil at the time was a good fellow, he replied quietly: 'All my fellows are good fellows.'

To his ideal life-companion, Mrs. Imrie, and her daughters, the sympathy of all who had the privilege of knowing the family goes out in full measure."

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VETERINARY ADVISORY SERVICE FOR SCOTLAND

A veterinary advisory service for Scottish farmers is being organised by the Department of Agriculture with officials at the East and West of Scotland agricultural colleges.

Laboratories at the colleges will be under the direction of the Scottish Board of Veterinary Research.

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A Reuter message from Buenos Aires records that President Ramon Castillo has received Captain Vincent Boyle, M.R.C.V.S., the British Government representative who is inspecting the measures taken in Argentina to ensure that meat exported to Great Britain comes from cattle free of foot-and-mouth disease. The Argentine Minister of Agriculture has just decreed that all cattle henceforth sold to local markets or the export market must undergo inspection at the point of origin.

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The announcement of Mr. Harry German's resignation from the chairmanship of the N.F.U. Diseases of Animals Committee, was made at the monthly council meeting in London recently. He will be succeeded by Mr. F. Russell Wood, of Bendish, Hitchin, Herts, who has been acting as vice-chairman.

CORRESPONDENCE

Letters to the Editor should reach the Office not later than by the first post on Monday morning for insertion in following Saturday's issue.

The views expressed in letters addressed to the Editor represent the personal views of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

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MINIMUM SALARIES FOR ASSISTANTS

Sir,—There are two ways of determining minimum salaries. One is to ascertain the minimum sum which, under present conditions, the class of employee concerned is likely to accept. This is the usual practice of commercial employers.

A more rational and far-sighted method, however, especially for highly skilled work, is to ascertain the minimum necessary to maintain the employee in health, and give enough security and

comfort to attract persons of the requisite ability, and encourage them to train themselves for the work and become efficient.

By this method there is no justification, other than tradition and prejudice, for the recent N.V.M.A. suggestion that the minimum salary for female assistants should be ten shillings a week less than for male. A professional woman pays the same college fees, needs the same amenities, and has similar family obligations. Veterinary art and science both essentially consist of the triumph of brain over brawn, and I therefore see no reason to believe that our slighter build is in itself sufficient drawback to warrant a lower salary.

If, as is obviously the case to-day, practitioners prefer a male assistant, let them by all means pay for their prejudices by giving the men more than the N.V.M.A. minimum, but that a lower minimum should be officially laid down for us by an association claiming to speak on behalf of the entire profession is to degrade the whole N.V.M.A. to the level of those few diehards in it who still wish to prevent women from playing their full part in the profession.

The younger men would do well to ensure that a reserve of fully qualified assistants who have become inured to accepting lower salaries is not being created for use in undermining their own conditions.

Yours faithfully,

495, Footscray Road, CONNIE M. FORD.
New Eltham,
London, S.E.9.
June 19th, 1943.

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VETERINARY SURGEONS ACTS (AMENDMENT) BILL

Sir,—It was refreshing to read Mr. J. C. Buxton's clearly reasoned letter in your issue of June 5th. Mr. Dykes's remarks in the June 19th issue were also most pertinent.

Many of the letters written about the new Bill have been mere irate outpourings; some of the writers do not appear even to have read the Draft with any care. Certainly the Bill is not perfect, but its basis is sound. As it is not possible, in a democracy, to eliminate quackery overnight, the next best thing is to control it as much and as soon as possible, and to prevent the appearance of new generations of quacks. All this the Bill sets out to do.

I fear quackery will be always with us if we rely on the common sense of the public to eliminate it.

Complaints that unqualified persons are boasting that they will soon be veterinary surgeons seem rather trivial; if they should persist in making similar statements after the Bill has reached the Statute Book, they will be in acute danger of losing their livelihood.

The suggestion by one writer that quackery would be abolished if dangerous drugs were not sold to unqualified persons is also rather futile. Such persons are not allowed at present to buy dangerous drugs, but they can quack quite well with the—relatively—harmless medicaments.

Yours faithfully,

10, Newport Road, MARY J. FARMAN.
Cardiff.
June 24th, 1943.

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Sir,—A meeting of students was held in this College to discuss the Draft Bill for controlling practice on animals by unqualified persons. The meeting was addressed by an eminent advocate who went over the Bill explaining its provisions and giving his conclusions.

Many of those present, largely due to recent unfavourable letters in your columns, came biased against this Bill, but as each provision was discussed it became apparent that this Bill has been drawn up with considerable skill and foresight and in such a way that it will ultimately bring the treatment of animals entirely under the control of the Royal College of Veterinary Surgeons and yet stands a reasonable chance of becoming law.

Before giving the conclusions of Final Year, the suggestion is put forward that local divisions of the N.V.M.A. would profit by hearing legal opinion on the matter at some future meeting.

Points favouring the profession:—

1. Unqualified practitioners are brought under the control of the R.C.V.S.
2. The status of such persons is not raised, *viz.*:—
   (i) They are not given any professional privileges.
   (ii) Touting and advertising will be prevented.
   (iii) They are still unable to use any description calculated to mislead the public as to their qualifications.
   (iv)They are not entitled to consult with a veterinary surgeon.
3. A definite number of "animal practitioners," properly registered, will be fixed and this number cannot increase, but will steadily decrease.

Points unfavourable to the profession:—

The title "registered animal practitioner" may mislead the public into assuming greater skill than such persons possess and mistaking them for veterinary surgeons. It is suggested that the title "registered unqualified animal practitioner" be used instead.

Yours faithfully,

ROBT. F. GIRVAN,
For Final Year.
Students' Representative Council,
Royal (Dick) Veterinary College,
Edinburgh, 9.
June 17th, 1943.

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SOLANIN POISONING IN PIGS

Sir,—It happens that an experiment in the feeding of pigs on sprouted potatoes is in progress here at the present time. The particulars to date are as follows:—

Subjects.—Two pigs 201 days old and weighing 178 and 212 lb. respectively at the commencement of the trial on 31.5.43.

Material used.—Greened, sprouted potatoes steamed for 20 minutes. Many of the potatoes carry long sprouts and any that have been split open show distinct greening throughout the whole substance.

Procedure.—31.5.43.—Each pig was given 2½ lb. baconer meal, 16 lb. potatoes and one gallon whey. The potatoes were not relished and were not cleaned up.

1.6.43.—Pigs showed slight scouring, which was put down as being probably due to overfeeding on the 30th. Ration of meal reduced to 1 lb. and sprouted potatoes given at afternoon feed only, sound potatoes were given at the morning feed.

2.6.43.—Ration as above.

3.6.43 and 4.6.43.—Sprouted potatoes substituted for sound ones at morning feed.

5.6.43 to 10.6.43.—Quantity of potatoes reduced to 12 lb. because the feed was not being cleaned up.

11.6.43 to 15.6.43.—Baconer meal replaced by ½ lb. fish meal and quantity of potatoes raised to 16 lb. This quantity was now eaten well except on the 15th, when potatoes with exceptionally long sprouts were given and very few were eaten.

16.6.43.—The supply of whey was exhausted and 3½ lb. more potatoes were given. These were not eaten and the quantity was reduced to 16 lb.

Progress of pigs in terms of weight:—

	Animal 1.	2.
Weight at commencement of trial ...	178 lb.	212 lb.
„ June 7th, 1943 ...	174 lb.	214 lb.
„ June 15th, 1943 ...	183 lb.	222 lb.

From this it would appear that pigs of this age and weight can be fed on steamed sprouted potatoes and suffer no harm. In view of the large supply of sprouted potatoes at the moment it seems well, therefore, that some reservation be made to the article by Mr. Ogilvie, which might otherwise have the effect of the complete condemnation of sprouted potatoes in the feeding of pigs.

Yours faithfully,

Midland Agricultural College, W. J. IRONSIDE.
Sutton Bonington,
Loughborough.
June 19th, 1943.

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DISEASES OF SHEEP DISCUSSION: A CORRECTION

Sir,—In order to make the best use of the limited paper now available, the text of contributions to discussions at meetings should be approved by the speakers concerned before publication. By this means, the publication of such inaccuracies as I am reported, in last week's *Record*, to have said at the meeting of the South Wales Division held last December, would be avoided. The paragraph should have read as follows: "Post-parturient gas gangrene was very common in North Devon and some farmers lost 10 to 15 per cent. of their ewes annually from this cause. Following a period during which almost 100 per cent. mortality occurred from this disease in his dystokia cases, he used prophylactically a polyvalent serum against *C. chauvei, welchii* and *septique*. Cases then ceased to occur. Dr. Montgomerie had mentioned a special type D serum. Why was this necessary, since the lamb dysentery serum conveyed immunity against both the toxins of the type D organism?"

Yours faithfully,

The Elms, E. W. ASCOTT.
Newbridge Gardens,
Bridgend,
Glam.
June 19th, 1943.